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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/548,637

04/13/2000

John R Koza

50291.P009

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08/04/2008

Michael J Mallie  
Blakely Sokoloff Taylor & Zafman LLP  
12400 Wilshire Boulevard  
7th Floor  
Los Angeles, CA 90025

EXAMINER

WONG, LUT

ART UNIT

PAPER NUMBER

2129

MAIL DATE

DELIVERY MODE

08/04/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/548,637	<b>Applicant(s)</b> KOZA ET AL.	
	<b>Examiner</b> LUT WONG	<b>Art Unit</b> 2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 9-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This office action is responsive to an AMENDMENT entered April 09, 2008 for the patent application 09/548637.

The office action of Dec 10, 2007 is fully incorporated into this office action by reference.

### ***Status of Claims***

Claims 1-6, 9-23 are pending. Claims 1, 14-16, 22-23 have been amended. Claims 7-8 have been canceled.

### ***Response to Arguments***

Applicant's amendment has overcome previous spec and claim objection.

Applicant's arguments with respect to 102(b) bar rejections have been fully considered and are persuasive. The rejection has been withdrawn.

Drawing objection is maintained.

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

1) Claim 23 has been amended to recite "computer-readable storage medium". Such term is not described in the spec. Applicant should amend pg.33 L6-11 of the spec to overcome the objection.

2) Claims 7-9 recites "externally invokable" and "internally invokable" Such terms are not described in the spec.

### ***Claim Objections***

#### **Claims 1, 22-23 are objected to because of the following informalities:**

Claim 1, 22 and 23: "each iterative operation including" should be changed to "each iterative operation including:"

Claim 1, 22 and 23: "entity, if" should be changed to "entity if".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-6, 9-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claim 1, 22 and 23: the phrase "performing iterative operations via one or more genetic programming operations" is unclear. How does the "iterative operations" *performed via* "genetic programming operations"? While the Examiner understands

“each iteration *includes* genetic programming operations” (which happens in creating new candidate step), nowhere does it suggest “performing iterative operations via one or more genetic programming operations”. As such, the Examiner contends that applicant fails to particularly claim the invention.

Claim 15 recites “*wherein whether the selected candidate entity more closely satisfies the design requirement*” lacks antecedent basis. Claim 1 does not recite “selecting a candidate entity that more closely satisfies the design requirement”.

Claim 16 is rejected for the same reason as claim 15.

Any claim not specifically addressed, above, is being rejected as incorporating the deficiencies of a claim upon which it depends.

### ***Response to Arguments***

Applicant's arguments have been considered. Previous rejections have been withdrawn. However,

1) Since the applicant does not want to further explain what “architecture-altering operations”, “syntactic structure” is, the Examiner is forced to use the broadest reasonable interpretation of these terms in light of the specification and the generic description.

### ***Claim Rejections - 35 USC § 112***

**Claims 1-6, 9-23 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01.**

The omitted steps are: updating the iteration count at the end of each iteration. While claims 1, 22 and 23 do recite "an iteration count with a predetermined value" and "a number of iterative operations", nowhere do the claims change these values. As such, the iteration number would never reach the iteration count. The claimed method would never end with an infinite loop.

Any claim not specifically addressed, above, is being rejected as incorporating the deficiencies of a claim upon which it depends.

#### ***Claim Rejections - 35 USC § 101***

**Claims 1-6, 9-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

Since the claimed method, system and medium resulted in infinite loop (See 112<sup>2nd</sup> rejection above). The claimed invention is not believed to be directed to a practical application which produces a useful, concrete and tangible result.

#### ***Response to Arguments***

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 112***

**Claims 9-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. As set forth in the previous office action for reason of record**

***Response to Arguments***

Applicant's arguments have been fully considered but they are not persuasive. 1) Applicant's citation (i.e. Fig. 1A-1B; pg 88-95), fails to support the claim. The Examiner did not see anywhere in the spec (text search or the cited section) recite "externally invokable" or "internally invokable". Applicant is advised to use a term consistent with the spec. The Examiner suggests applicant go after the real invention (i.e. the method itself) rather than the implementation (i.e. parallel processing).

***Claim Rejections - 35 USC § 103***

**Claims 1-6, 9-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicants' admitted prior arts (APA) by Koza et al, (US 5867397) and in view of another APA (Ullman, J.R) as set forth in the previous office action.**

Claim 1: the amended limitations are nothing more than inherent nature of genetic programming. i.e. the initialization of population, iteration, termination criteria are inherent in genetic programming and are well known in the art.

***Response to Arguments***

In re pg. 18-21, Applicant's arguments have been fully considered but they are not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Specifically, the Examiner disagrees with applicant's allegation.

1) The Examiner formulates the rejection based on what is already known to one of ordinary skill in the art. In other words, genetic programming and isomorphic values are both well known in the art. Applicant's spec admits these facts and thus APA.

2) The motivation to combine was set forth in the rejection. One skill in the art who is aware of "patenting" would immediately motivated to combine both teachings. Applicant's argument of "without applicant's own disclosure, it is not obvious to one skill with ordinary skill in the art to combine these two references" is unsounded.

3) Interestingly though, see pg. 3 of applicant submitted GP-workshop reviewer's comment.



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The main contribution of the paper was a technique for penalizing evolved solutions if they were too similar to known solutions. Specifically, to drive the solutions away from a ladder architecture, individuals were penalized for being isomorphic to subgraphs of a large ladder of capacitors.

But this is in actuality little more than old-fashioned fitness sharing, where the designs to be avoided are seeded into the population. The main claim of the paper then reduces to this: fitness sharing creates diversity. That is hardly a new result. This is why I ranked the significance and originality rather low.

Hence, one of ordinary skill in the art would agree that originality of the invention is rather low, which mean it is rather obviousness to one of ordinary skill in the art. EN: such statement suggests that “without applicant’s own disclosure, it is still obvious to one skill with ordinary skill in the art to combine these two references”

### Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lut Wong whose telephone number is (571) 270-1123. The examiner can normally be reached on M-F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent David can be reached on (571) 272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Lut Wong/  
Patent Examiner, AU 2129

/David R Vincent/  
Supervisory Patent Examiner, Art Unit 2129